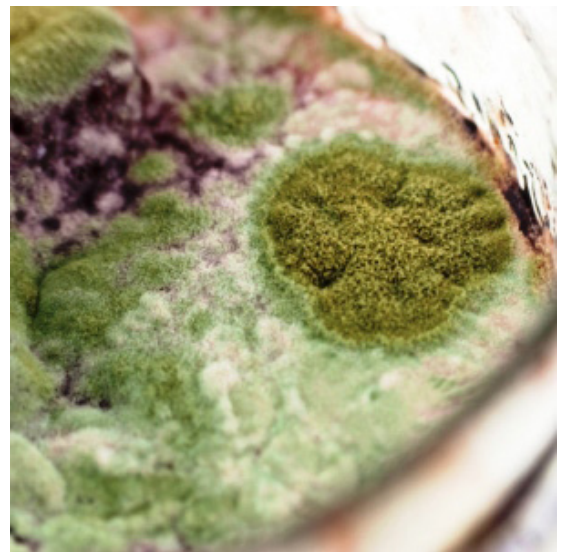


BACTERIA FARM: HOW TO GROW YOUR OWN GERMS!

Bacteria are everywhere, and a fun way to see this is to take samples and grow your own colonies!

YOU WILL NEED

- Baby food jars with lids
- Cotton wool buds
- 1 packet unflavoured gelatine
- 1 tablespoon of sugar
- ½ tablespoon of beef stock powder
- Masking tape
- Marker pen



WHAT YOU DO

Step 1

Sterilise the jars by first rinsing them with hot soapy water, then afterwards pouring in boiling water and leaving to sit for 2-3 minutes. Also boil the lids for a few minutes. This will help make sure that the bacteria colonies you grow are from the samples that you take.

Step 2

Place the packet of gelatine, the sugar and the beef stock powder into a saucepan with two cups of water and heat gently, stirring until the gelatine, sugar and beef stock powder have dissolved.



This experiment must be done under the supervision of an adult to ensure safety when using hot water.



Step 3

Pour the mixture into the jars until each is half full. The more jars you use, the more samples you can try. Wait until the solution sets and cools to room temperature, then replace the lids.

Step 4

Take a cotton wool bud and take a sample of bacteria - they are everywhere, so just run the cotton wool bud across things like the inside of your mouth, behind your fingernails, the toilet seat or a door handle. Make sure you use a fresh cotton bud for each sample you take!

Step 5

When you have taken your sample, take the lid off of a jar and run the cotton wool bud across the surface of the gelatine in a zigzag pattern, quickly replacing the lid on the jar afterwards. Dispose of the used cotton bud and use the masking tape and marker pen to label the jar so you remember where you took the sample.

Step 6

Leave at room temperature for 3-5 days and return to see your bacteria colonies growing in the jar!

THE SCIENCE BEHIND IT

Bacteria are microorganisms, which means that they are so small that they can only be seen under a microscope. They are everywhere you look, but you cannot see them because they are only one cell big. Your body is made of trillions of cells, which is why you are easy to see, but bacteria are only one cell big, so you need lots and lots of them to be able to see them without a microscope. This experiment is a great way of seeing microorganisms without a microscope, because the bacteria that you collected used the protein in the gelatine, and the sugar and other nutrients from the beef stock, as food to multiply until there were millions and millions of individual bacteria visible as colonies.



Why not make the experiment more fun next time by seeing what happens when you put some liquid soap on a cotton bud and running it through the zigzag you drew with your sample? Or try changing the temperature by putting a jar in a warm place (like near a radiator) and another jar in a cold place (like in the fridge). What do you think will happen? Write down your guesses and compare them with what happens in the jars!



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